



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/666,144

09/20/2000

Vaijayanti A. Kumar

273944

5793

26694

7590

12/27/2006

VENABLE LLP

P.O. BOX 34385

WASHINGTON, DC 20043-9998

EXAMINER

ANGELL, JON E

ART UNIT

PAPER NUMBER

1635

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

12/27/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

09/666,144

Applicant(s)

KUMAR ET AL.

Examiner

Jon Eric Angell

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 14-20 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) 15-18 and 25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 19, 20, 24 and 26 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>attached</u> .                           |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application  |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____.                          |

### DETAILED ACTION

This Action is in response to the communication filed on 10/6/2006.

The amendment filed 10/6/2006 is acknowledged and has been entered.

Claims 14-20 and 24-26 are currently pending in the application and are addressed herein.

1. Any rejections not reiterated in this action have been withdrawn as being obviated by the amendment of the claims and/or applicant's arguments.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-18 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 encompasses a chemical molecule set forth as chiral aep monomeric unit IV which contains an element designated as "T" which is not specifically defined in the claim. At first glance, it was assumed that "T" was the nucleotide thymine however, a closer evaluation of the claims reveals that the T in monomeric unit IV of claim 15 could be something other than thymine. For instance, also encompasses a compound having the formula aep PNA III which contains an element designated as "B" which is specifically defined in claim 15 (see last three lines of claim 15). Next, looking at steps i-v of claim 16, which depend on claim 15, it is clear that B and T can be the same (i.e., B=T). In light of the fact that claim 15 specifically defines

Art Unit: 1635

“B” as a genus of specific elements which includes elements other than thymine, and further in view of the fact that 15 does not specifically define “T”, it is clear the “T” of claim 15 is not limited to being thymine. Since “T” in claim 15 is not limited to thymine, it is unclear what exactly is and what is not encompassed by “T” in claim 15. Accordingly, the instant rejection is proper. It is noted that amending claim 15 to specifically define “T” such as by adding the phrase “wherein T is thymine” would obviate this rejection.

Claim 16 encompasses step iii, which reads “ $m=n=1$ ,  $B=T$ ,  $R_1=H$ ,  $R_2=NH(CH_2CH_2COOH)$ ,  $a=b=c=d=1$ , repeating twice in that order” (Emphasis added). The phrase “repeating twice in that order” renders the instant claim indefinite because it is unclear what is exactly repeated twice in that order. Applicants are asked to explain what exactly is “repeated twice in that order” and to consider amending the claim to include the explanation. Alternatively, deleting the phrase “repeating twice in that order” would obviate the rejection.

Claims 17, 18, 25 are included in the rejection because they are dependent claims which also encompass the indefinite embodiments of claims 15 and/or 16.

#### ***Allowable Subject Matter***

Claims 14, 19, 20, 24 and 26 are allowed.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Eric Angell whose telephone number is 571-272-0756. The examiner can normally be reached on 9:00 a.m.- 5:00 p.m..

Art Unit: 1635

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Douglas Schultz can be reached on 571-272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J.E. Angell, Ph.D.  
AU 1635



JON E. ANGELL, PH.D.  
PRIMARY EXAMINER